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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,996	06/06/2000	Hisashi Ohtani	07977/220002/US3527/3777D	9311

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EXAMINER	
CHUNG, DAVID Y	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/588,996	OHTANI ET AL.	
	Examiner	Art Unit	
	David Y. Chung	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/008,412* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 8-10 and 14-22 rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato et al. (U.S. 5,708,485).

As to claims 8, 14, 17 and 20, Sato et al. discloses an active matrix display device having a structure as shown in figures 1 and 2. Note the thin film transistor 7, semiconductor thin film 10, source line 9, gate line 8, pixel electrode 6, matrix array substrate 1, opposing substrate 2, and liquid crystal layer 3. A storage capacitor 13 is formed between semiconductor thin film 10 and auxiliary line 14.

Sato et al. is silent regarding the occurrence of disclination. However, Hirata et al. provides evidence that disclination is inherent in the device of Sato et al. in regions comprising the thin film transistor and storage capacitor. Hirata et al. discloses a conventional active matrix device in figure 17 having a light blocking film 232d with an opening corresponding with an area enclosed by the dashed line. See column 18, lines 31-38. The light blocking film 232d is provided in order to prevent deterioration of the display quality occurring due to the disclination in the region outside the dashed line. Since disclination deteriorates the display quality of a wide area corresponding to the pixel electrodes 114, the opening of the light blocking film 232d is required to be reduced in size. See column 18, lines 60-66.

Because Sato et al. is substantially identical to the claimed invention and Hirata et al. presents evidence tending to show the inherency of disclination, the burden shifts to the applicant to show an unobvious difference. *In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).* See MPEP §§ 2112 - 2112.02.

As to claims 9, 15, 18 and 21, Sato et al. discloses a top-gate thin film transistor in figure 1.

As to claims 10, 16, 19 and 22, because the recitation of intended use does not result in a structural difference between the claimed invention and the prior art of Sato et al., it does not patentably distinguish the claims from Sato et al. If the prior art

structure is capable of performing the intended use, the claims are considered met. See MPEP § 707.07.

2. Claims 2 and 11-13 rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato et al. (U.S. 5,708,485).

As to claims 2, 11 and 13, Sato et al. discloses an active matrix display device having a structure as shown in figures 1 and 2. Note the thin film transistor 7, semiconductor thin film 10, source line 9, gate line 8, and pixel electrode 6. A metal interconnection 12 is electrically connected to the drain of the thin film transistor and the pixel electrode 6. An insulating layer 17 is formed over the source line and a conductive light blocking film 16M is formed over insulating layer 17. The conductive light blocking film 16M and metal interconnection 12 partially overlap to form a capacitor. Sato et al. teaches that the interlayer insulating layers 15, 17 and 18 may be formed of inorganic or organic substances. See column 7, lines 55-60.

Because the recitation of intended use does not result in a structural difference between the claimed invention and the prior art of Sato et al., it does not patentably distinguish the claims from Sato et al. If the prior art structure is capable of performing the intended use, the claims are considered met. See MPEP § 707.07.

Sato et al. is silent regarding the occurrence of disclination. However, Hirata et al. provides evidence that disclination is inherent in the device of Sato et al. in regions comprising the thin film transistor and capacitor. Hirata et al. discloses a conventional

active matrix device in figure 17 having a light blocking film 232d with an opening corresponding with an area enclosed by the dashed line. See column 18, lines 31-38. The light blocking film 232d is provided in order to prevent deterioration of the display quality occurring due to the disclination in the region outside the dashed line. Since disclination deteriorates the display quality of a wide area corresponding to the pixel electrodes 114, the opening of the light blocking film 232d is required to be reduced in size. See column 18, lines 60-66.

Because Sato et al. is substantially identical to the claimed invention and Hirata et al. presents evidence tending to show the inherency of disclination, the burden shifts to the applicant to show an unobvious difference. *In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980)*. See MPEP §§ 2112 - 2112.02.

As to claim 12, Sato et al. discloses a top-gate thin film transistor in figure 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (U.S. 5,708,485) in further view of Ueda et al. (U.S. 5,459,596), Miyazawa (U.S. 5,781,260), Hanazawa et al. (U.S. 5,835,171), and Koseki et al. (U.S. 5,345,324).

Sato et al. discloses an active matrix display device having a structure as shown in figures 1 and 2. Note the thin film transistor 7, semiconductor thin film 10, source line 9, gate line 8, and pixel electrode 6. A first insulating layer 15 is formed over the thin film transistor. A metal interconnection 12 electrically connects the pixel electrode to the drain of the thin film transistor through a contact hole formed in insulating layer 15. The conductive light blocking film 16M and metal interconnection 12 partially overlap to form a capacitor with a second insulating layer 17 interposed between.

Because the recitation of intended use does not result in a structural difference between the claimed invention and the prior art of Sato et al., it does not patentably distinguish the claims from Sato et al. If the prior art structure is capable of performing the intended use, the claims are considered met. See MPEP § 707.07.

Sato et al. is silent regarding the occurrence of disclination. However, Hirata et al. provides evidence that disclination is inherent in the device of Sato et al. in regions comprising the thin film transistor and capacitor. Hirata et al. discloses a conventional active matrix device in figure 17 having a light blocking film 232d with an opening corresponding with an area enclosed by the dashed line. See column 18, lines 31-38. The light blocking film 232d is provided in order to prevent deterioration of the display quality occurring due to the disclination in the region outside the dashed line. Since

disclination deteriorates the display quality of a wide area corresponding to the pixel electrodes 114, the opening of the light blocking film 232d is required to be reduced in size. See column 18, lines 60-66.

Because Sato et al. is substantially identical to the claimed invention and Hirata et al. presents evidence tending to show the inherency of disclination, the burden shifts to the applicant to show an unobvious difference. *In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).* See MPEP §§ 2112 - 2112.02.

Sato et al. does not disclose rubbing an alignment layer in one direction from one corner of the pixel. However, this was common and conventional at the time of invention as evidenced by the disclosures of Koseki et al., Hanazawa et al., Miyazawa, and Ueda et al. See column 20, line 53 – column 21, line 4 of Ueda et al. Note in figure 3 of Miyazawa, the crossed arrows denoting the direction of the alignment treatment on the upper and lower substrates, respectively. Note in figure 7 of Hanazawa et al., the diagonal arrow denoting the rubbing direction of the orientation film. Note in figures 5A, 7A and 8-10 of Koseki et al., arrow 9 showing the rubbing direction. The benefits of this conventional rubbing technique included lowering manufacturing costs and producing a device with predictable behavior. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to rub the alignment layer in one direction from one corner of the pixel because of the aforementioned benefits.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 2 and 4 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10 and 16 of U.S. Patent No. 6,088,070. Although the conflicting claims are not identical, the incorporation of the claimed active matrix device in an electronic apparatus does not constitute a patentable distinction from the corresponding claims of U.S. Patent No. 6,088,070.

Response to Arguments

5. Applicant's arguments with respect to claims 2 and 4-22 have been considered but are moot in view of the new ground(s) of rejection.

6. In regards to the rejection of claims 1, 2 and 4 under nonstatutory double patenting, applicants had previously indicated that a terminal disclaimer would be filed.

However, since one has not yet been received, the rejection of claims 1, 2 and 4 under nonstatutory double patenting is maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

KENNETH PARKER
PRIMARY EXAMINER

David Chung
GAU 2871
07/25/03